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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,886	03/27/2001	Masayuki Yamada	36409-01000	2430

7590 03/24/2004
Milbank, Tweed, Hadley & McCloy LLP
1 Chase Manhattan Plaza
New York, NY 10005-1413

EXAMINER

HARPER, V PAUL

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/818,886

Applicant(s)

YAMADA ET AL.

Examiner

V. Paul Harper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23,25,27 and 28 is/are allowed.
- 6) ☒ Claim(s) 1,6-9,11,16-19,21,22,24,26,29-34 is/are rejected.
- 7) ☐ Claim(s) 2-5,10,12-15 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 6-9, 11, 16-19, and 21, 22, 24, 26, 30, 31, 33 and 34 rejected under 35 U.S.C. 102(b) as being anticipated by Kamai et al. (US Patent 5,864,812), hereinafter referred to as Kamai.

Regarding claims 1, 11, 21 and 22 Kamai discloses a method for speech synthesis using synthesized speech segments.

Kamai teaches:

- an the extraction step of extracting a plurality of small speech segments from a speech waveform (col. 4, lines 5-10);
- a prosody control step of processing the plurality of small speech segments to control prosody of the speech waveform while limiting processing of prosody control for a selected small speech segment of the plurality of small speech segments (Fig. 1, item 1, col. 4, lines 5-23, col. 6, lines 65-67); and

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- a synthesizing step of obtaining synthesized speech by using the speech waveform for which prosody control is performed in the prosody control step (Fig. 1, item 8, col. 4, lines 15-20).

Regarding claim 6 and 16, Kamai teaches: a unit means in which a plurality of window functions arranged along a time axis and limitation information corresponding to at least one of the window functions are stored is used, in the extraction step, small speech segments are extracted from a speech waveform by using the plurality of window functions, and in the prosody control step, when limitation information is made to correspond to a window function, a small speech segment extracted by using the window function is selected and the limitation is imposed on the small speech segment on the basis of the limitation information (Fig. 1, col. 6, lines 30-67, in particular lines 39-41).

Regarding claims 7 and 17, Kamai teaches: the limitation information is added to a small speech segment corresponding to a specific position on a speech waveform (Fig. 3, col. 6, lines 54-64).

Regarding claims 8 and 18, Kamai teaches: the specific position includes a boundary between a voiced sound portion and an unvoiced sound portion (col. 7, lines 55-63).

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Regarding claims 9 and 19, Kamai teaches: the specific position includes a phoneme boundary (col. 7, lines 36-40, Fig. 20, col. 14, lines 36-56, syllable ID).

Regarding claims 24 and 26, these claims are rejected for the same reasons given in the rejections of claims 1 and 6, above.

Regarding claims 30 and 33, Kamai teaches everything claimed, as applied above (see claims 1 and 11, respectively); in addition, Kamai teaches that the limited processing of prosody control includes repetition of the selected small speech segments (col. 12, lines 11-20, number of elements).

Regarding claims 31 and 34, Kamai teaches everything claimed, as applied above (see claim 1); in addition, Kamai teaches that the limited processing of prosody control includes a change in an interval of the selected small speech segment (col. 6, lines 59-65, duration).

2. Claims 29 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by the prior art discussion in Kamai et al. (US Patent 5,864,812), hereinafter referred to as Prior art in Kamai.

Regarding claims 29 and 32, Prior art in Kamai teaches the pitch synchronous overlap add method where the speech input is cut out at a window (claim 1 extraction; col. 3, lines 6-10); overlapped to a desired pitch period when synthesizing (claim 1,

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prosody control, and synthesizing step; col. 3, lines 6-10); the "processing of prosody control includes the deletion of selected small speech segment" (col. 3, lines 17-20, time length can be controlled by decimating cut-out pitch waveform).

Claim Objections

3. Claims 2, 3, 4, 5, 10, 12, 13, 14, 15, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 2 and 12, it is noted that the closest prior art of record, Kamai et al. (US Patent 5,864,812) does not teach adding limitation information for inhibiting execution of predetermined processes.

Regarding claims 10 and 20, noted that the closest prior art of record, Kamai et al. (US Patent 5,864,812) does not teach that the specific position is a predetermined range including a plosive.

Reasons for Allowance

4. Claims 23, 25, 27, and 28 are allowed.

Regarding claims 23 and 25, it is noted that the closest prior art of record, Kamai et al. (US Patent 5,864,812) does not teach adding limitation information for inhibiting execution of predetermined processes. Thus, independent claims 23 and 25 are allowable over the prior art of record because the cited prior art alone or in combination, does not fairly suggest or disclose the claimed combination of features.

Regarding claims 27 and 28, it is noted that the closest prior art of record, Kamai et al. (US Patent 5,864,812) does not teach inhibiting execution of the predetermined processes. Thus, independent claims 27 and 28 are allowable over the prior art of record because the cited prior art alone or in combination, does not fairly suggest or disclose the claimed combination of features.

Response to Arguments

5. Applicant asserts on page 11:

In the office action, the Examiner states that the prosody control step of claim I is disclosed by the reference at FIG. 1, item 1, column 4 lines 5-23 and column 6, lines 56-57. However, Kamai merely teaches controlling the speech segments along the timing expressed by the time information (column 4, lines 20-23).

Kamai states that each syllable has data fields for phrase length, accent level, duration, start pitch, central pitch, etc. (col. 6, lines 59-64), which covers the speech parameters normally associated with prosody.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to:


Crystal Park II
2121 Crystal Drive
Arlington, VA.
Sixth Floor (Receptionist)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. V. Paul Harper whose telephone number is (703) 305-4197. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (703) 305-9645. The fax phone number for the Technology Center 2600 is (703) 872-9314.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service office whose telephone number is (703) 306-0377.



VPH/vph
March 19, 2004



RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER